

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BOARD OF PATENT APPEALS
AND INTERFERENCES

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte BONG-JIN LEE and
YOUNG-SUB AHN

Appeal No. 2001-2064
Application No. 08/876,179

HEARD: January 7, 2003

Before HAIRSTON, DIXON, and SAADAT, Administrative Patent Judges.
HAIRSTON, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection¹ of claims 1 through 8 and 10 through 18.

The disclosed invention relates to a connector for connecting a printed circuit board on a head/disk assembly to another printed circuit board.

¹ Claim 9 was mistakenly included in the final rejection (paper number 22).

Claim 1 is illustrative of the claimed invention, and it reads as follows:

1. A hard disk drive, comprising:

a disk assembly, comprising:

a body;

a spindle motor supported by said body;

a first connector attached to said body;

a first printed circuit board attached to said body and connected to said spindle motor; and

a plurality of contacts mounted on said first printed circuit board;

a second printed circuit board, comprising:

a second connector engageable with said first connector of said disk assembly while said second printed circuit board is attached to said disk assembly; and

a third connector having a plurality of terminals attached to said second printed circuit board, said plurality of terminals of said third connector of said second printed circuit board automatically electrically engaging said contacts on said disk assembly to transfer signals between said second printed circuit board and said spindle motor when said second connector of said second printed circuit board is engaged with said first connector of said disk assembly.

The references relied on by the examiner are:

Schuder et al. (Schuder)	5,259,777	Nov. 9, 1993
Yumibe et al. (Yumibe)	5,378,160	Jan. 3, 1995
Broschard, III et al. (Broschard)	5,667,408	Sept. 16, 1997
		(filed Apr. 28, 1995)

Claims 1 through 4, 6 through 8, 10, 12, 14², 15, 17 and 18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the admitted prior art in view of Yumibe.

Claims 5, 11 and 13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the admitted prior art in view of Yumibe and Schuder.

Claim 16 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over the admitted prior art in view of Yumibe and Broschard.

Reference is made to the briefs (paper numbers 28 and 32) and the answer (paper number 31) for the respective positions of the appellants and the examiner.

OPINION

We have carefully considered the entire record before us, and we will sustain the obviousness rejection of claims 1 through 8 and 10 through 18.

Appellants have not challenged the examiner's findings (answer, pages 3 and 4) concerning the admitted prior art. With the exception of the examiner's finding that "[t]he admitted prior art does not teach that the contact connector automatically engages the contacts," we agree with the findings made by the examiner. Although the connector for connecting the printed circuit board on the head/disk assembly to the other printed circuit board in the admitted prior art (Figures 1 through 3) differs significantly from the connector in the disclosed invention (Figures 4 through 8), the

² Although claim 14 was not listed among the claims found in the statement of the rejection (answer, page 3), it was listed with the claims directed to P-shaped terminals (answer, page 5).

connector in the admitted prior art “automatically” electrically engages the contacts on the disk assembly after manual insertion of the printed circuit board 46 (Figure 3) into the cavity 44 of the 4-pin connector 40 (Figures 1 and 2). Nothing in the claims on appeal precludes the manual insertion of the printed circuit board into the cavity of the 4-pin connector. More importantly, nothing in the case law states that the “reference’s device must necessarily and in all circumstances work the same way as the inventor’s device” when inherency³ is resorted to in an obviousness rejection (reply brief, page 2). In view of the foregoing, the obviousness rejection of claim 1 is sustained based upon the teachings of the admitted prior art.

With respect to the examiner’s reliance on the secondary teachings of Yumibe, we find that the skilled artisan would have turned to Yumibe to replace a connector (e.g., the admitted prior art connector) that is “difficult to install” or “require specialized installation” with the resilient spring-like connector 10 disclosed by Yumibe (column 1, line 65 through column 2, line 7). Appellants acknowledge (specification, page 6, lines 11 through 14) that they went to the spring-like connector 14 (Figures 5, 7 and 8) because the manual insertion process was “complicated and troublesome.” Inasmuch as appellants’ reason for turning to the spring-like connector is the same reason disclosed by Yumibe, it would have been manifestly obvious to the skilled artisan to replace the admitted prior art connector with the connector disclosed by Yumibe. Thus, appellants’ arguments (brief,

³ In Glaxo Inc. v. Novopharm Ltd., 52 F.3d 1043, 1047, 34 USPQ2d 1565, 1567 (Fed. Cir. 1995), inherency was raised based upon an alleged anticipation, and not obviousness.

pages 6 and 11 through 13; reply brief, pages 5 and 6) to the contrary notwithstanding, Yumibe does not teach away from such a modification.

Turning to claim 16, the intermediate portion 48 and the tail portion 50 of the terminal lead 42 meet to form a V-shaped terminal⁴ in Yumibe. The bend 46 of the same terminal forms a C-shape terminal⁵. With respect to the 4-pin type of connector set forth in claim 18, the admitted prior art discloses a 4-pin connector 40 that mates with the four contacts 48 (Figures 1 through 3). Accordingly, the obviousness rejection of claims 16 and 18 is sustained.

The obviousness rejection of claims 2 through 8, 10 through 15 and 17 is likewise sustained because of appellants' grouping of the claims (brief, page 2; reply brief, page 2).

DECISION

The decision of the examiner rejecting claims 1 through 8 and 10 through 18 under 35 U.S.C. § 103(a) is affirmed.

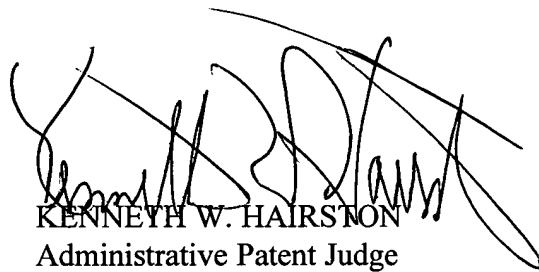
⁴ The V-shaped terminals disclosed by Broschard are merely cumulative to the V-shaped terminals already disclosed by Yumibe.


⁵ The C-shaped terminals disclosed by Schuder are cumulative to the C-shaped terminals disclosed by Yumibe.


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No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED


KENNETH W. HAIRSTON
Administrative Patent Judge


JOSEPH L. DIXON
Administrative Patent Judge


MAHSHID D. SAADAT
Administrative Patent Judge

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